

Contents—Complete Volume I

NUMBER 1, SEPTEMBER 1968

Preface	vii
P. LACOMBE (Paris, France)	
Biographical Note: Pierre Jacquet (1906–1967).	1
C. W. PRICE (Columbus, Ohio)	
Metallographic Preparation of Beryllium by Electrolytic Lapping	5
J. H. BENDER (Los Alamos, New Mexico)	
Qualitative Metallography of Uranium-Plutonium Mixed Carbide Fuels	19
W. E. STUMPF AND C. M. SELLARS (Sheffield, England)	
Measurement of Particle Density and Volume Fraction from Extraction Replicas	25
J. H. WOODHEAD (Sheffield, England)	
The Investigation of Nucleation and Growth Processes by Quantitative Metallographic Methods	35
H. YAKOWITZ AND K. F. J. HEINRICH (Washington, D. C.)	
Inclusion Identification by Means of Electron Probe Microanalysis	55
R. A. FARRAR (Southampton, England), AND H. W. KING (London, England)	
Axial Ratios and Solubility Limits of H.C.P. n Phases in the Systems Cd-Au, Cd-Li, and Zn-Li	79
J. F. MCNEIL (Adelaide, South Australia)	
The Direct Recording of Field Ion Micrographs by Electrographic Methods	91
M. J. MAKIN (Harwell, England)	
The Theory of Image Contrast in Electron Microscopes	109

SHORT COMMUNICATIONS

JAMES H. RICHARDSON (El Segundo, California)	
Elimination of Hydrofluoric Acid Damage to Metallograph Lenses	149
R. E. STAUB, JR. AND J. L. MCCALL (Columbus, Ohio)	
Increasing the Microscopic Contrast of Phases with Similar Reflectivities	153
B. R. BANERJEE (Philadelphia, Pennsylvania), AND J. J. HAUSER (Pittsburgh, Pennsylvania)	
M_s Temperatures in Fe-Ni Binary Alloys by Hot Stage Metallography	157
Books: A Selected List	161

NUMBER 2, NOVEMBER 1968

BRUCE L. BRAMFITT AND H. P. LEIGHLY, JR. (Rolla, Missouri)	
A Metallographic Study of Solidification and Segregation in Cast Aluminum-Uranium Alloys	165
N. E. RYAN, W. A. SOFFA, AND R. C. CRAWFORD (Oxford, England)	
Orientation and Habit Plane Relationships for Carbide and Nitride Precipitates in Molybdenum	195

Contents for Complete Volume

H. TENNY (Richland, Washington)	
Rapid Analysis of Particles Using a Microprobe and a Nondispersive X-Ray Analyzer	221

SHORT COMMUNICATIONS

MARC H. RICHMAN (Providence, Rhode Island)	
Electron Microscope Observations of Tungsten Selenide: A NESEM Summary	227
K. REID AND R. W. FRASER (Fort Saskatchewan, Alberta, Canada)	
Jet-Machining Disc Specimens for Transmission Electron Microscopy	233
T. M. KEGLEY, JR., D. M. HEWETTE II, AND B. C. LESLIE (Oak Ridge, Tennessee)	
Effect of Vibratory Polishing on the Appearance of Pyrolytic-Carbon Coatings	237
J. T. HOUSTON AND K. FARRELL (Oak Ridge, Tennessee)	
Correlation of Hardness with Microstructure in X8001 Aluminum Alloy	243
C. NEWTON AND D. L. OLSON (Ithaca, New York)	
A Chemical-Mechanical Polish for Tungsten	249

NUMBER 3/4, JANUARY 1969

P. S. KOTVAL (Indianapolis, Indiana)	
The Microstructure of Superalloys.	251
WALTER W. WALKER (Tucson, Arizona)	
A Metallographic Study of Some Fragments of the Canyon Diablo Meteorite . .	287
W. J. GRUBER AND E. C. WATTS (Richland, Washington)	
An Orbital Grinder-Polisher for Preparation of Irradiated Metallography Specimens	303
ARTHUR E. CALABRA, DON L. MARTS, JAMES F. CAPES, AND ROSS J. JACKSON (Golden, Colorado)	
Metallographic Preparation of Beryllium	311
D. A. ABOAV (Chorleywood, Herts., England) AND T. G. LANGDON (Cambridge, England)	
The Distribution of Grain Diameters in Polycrystalline Magnesium Oxide . . .	333
F. E. MCGRATH (Columbus, Ohio)	
A Metallographic Preparation Procedure for RDX Dispersed in TNT	341
HARRY A. MOREEN (Renton, Washington)	
Particle Size Distributions in Volume Diffusion-Controlled Ostwald Ripening . .	349
D. G. RENCKEN (Richland, Washington)	
A New Procedure for Revealing the Microstructure of α -Plutonium	365
A. J. BERRY (Melbourne, Australia) AND T. O. MULHEARN (Alexandria, New South Wales, Australia)	
Effective Case Depth: Uncertainties in Measurement	373
ROSS J. JACKSON AND RODNEY J. PINKNEY (Golden, Colorado)	
X-Ray Method for Measuring Percentage of Alpha in Delta-Stabilized Plutonium Alloys	387
G. W. MAO, J. G. LARSON, AND P. RAO (Minneapolis, Minnesota)	
The Microstructure of Lead Base Alloys	399

SHORT COMMUNICATIONS

J. A. NELSON AND R. M. SLEPIAN (Pittsburgh, Pennsylvania)	
An Epoxy-Sandwich Technique for Preserving Thin Coatings during Specimen Preparation	425

Contents for Complete Volume

V. K. GROTZKY AND F. J. FRAIKOR (Golden, Colorado)	
Preparation of Beryllium Foils for Transmission Electron Microscopy	431
ROSS A. BECKLEY (Princeton, New Jersey)	
Bioden Acetyl Cellulose Replica Technique	437
ROBERT J. VANARK, SR. (Milwaukee, Wisconsin)	
A Simplified Resin-Impregnation Method of Specimen Mounting	439
JOHN L. MILLER, JR. (Oak Ridge, Tennessee)	
Replication of Irradiated Materials	443
T. C. WELLS, P. A. LAVIN, AND D. MANTHORPE (Newcastle upon Tyne, England)	
Correlation of Orientation and Polarized Etching Facets in a Magnesium Alloy .	449
E. P. WHELAN (Ottawa, Canada)	
An Electropolishing Procedure for Tin and Dilute Tin-Lead Alloys	455
R. V. DAINY, J. M. TRENOUTH, AND E. P. WHELAN (Ottawa, Canada)	
Preparation of a Diffusion-Coated Niobium Alloy for Optical Metallography . .	459
Books: A Selected List	463
AUTHOR INDEX—Volume I	469
TITLE INDEX—Volume I	471

